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29995 7590 10/07/2008 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				
EXAMINER SUAREZ, FELIX E				
ART UNIT 2857		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/576,223

Applicant(s)

VAN COPPENOLLE ET AL.

Examiner

FELIX E. SUAREZ

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-38 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Objections - Improper Dependent Claim

1. Claim 28 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.

Claim 28 (device) depending from claim 1 (method), is improper because, the device does not further add method limitations (i.e. steps).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 17, 18, 32 and 33 are rejected under 35 U.S.C. 102(b) as being unpatentable over Bell et al. (U.S. Patent No. 4,819,195).

With respect to claim 17, Bell et al. (hereafter Bell) teaches, a method of virtually measuring a physical object the method comprising:

performing an evaluation of a cloud of points virtually representing said physical object (see col. 2, lines 25-47, coordinate measuring is typically a two or

three-dimensional process that determines the position of holes, surfaces, centerlines and slopes. Also if multiple inspections of similar parts are required, a reference location point may be established with a reference precision cube or sphere. Reader heads, traveling on each axis along built-in axis measuring scales, transfer the instantaneous machine position through the digital display and to the computer interface. The dimensional and geometric elements may then be calculate, compared, and evaluated, or stored, or printed out as required);

calculating one or more values based on the evaluation wherein the one or more values approximate the value or values that would result from the measurement of said physical object by a measuring device (see col. 2, lines 25-47, coordinate measuring is typically a two or three-dimensional process that determines the position of holes, surfaces, centerlines and slopes. Also if multiple inspections of similar parts are required, a reference location point may be established with a reference precision cube or sphere. Reader heads, traveling on each axis along built-in axis measuring scales, transfer the instantaneous machine position through the digital display and to the computer interface. The dimensional and geometric elements may then be calculated, compared, and evaluated, or stored, or printed out as required);

outputting the evaluation (see col. 2, lines 45-47, the dimensional and geometric elements may then be calculated, compared, and evaluated, or stored, or printed out as required; and see col. 3, lines 21-26, also, automatic data

recording, available on most machines, prevents errors in transcribing readings to the inspection report).

With respect to claim 18, Bell teaches, a method of virtually probing a physical object, the method comprising:

performing and evaluation of a stored cloud of points virtually representing said physical object (see col. 2, lines 25-47, coordinate measuring is typically a two or three-dimensional process that determines the position of holes, surfaces, centerlines and slopes. Also if multiple inspections of similar parts are required, a reference location point may be established with a reference precision cube or sphere. Reader heads, traveling on each axis along built-in axis measuring scales, transfer the instantaneous machine position through the digital display and to the computer interface. The dimensional and geometric elements may then be calculate, compared, and evaluated, or stored, or printed out as required);

calculating or selecting a point that approximates a point that would result from the probing of a coordinate measuring machine (CMM) on t said physical object, (see col. 2, lines 31-47, In a typical operation, the part is placed on the table of the CMM at a random location. Generally, this location is approximately central to the machine axes to access all of the part surfaces to the inspected with the probe. Also, if multiple inspections of similar parts are required, a reference location point may be established with a reference precision cube or

sphere. Reader heads, traveling on each axis along built-in axis measuring scales, transfer the instantaneous machine position through the digital display and to the computer interface. The dimensional and geometric elements may then be calculate, compared, and evaluated, or stored, or printed out as required); and

outputting the evaluation (see col. 2, lines 45-47, the dimensional and geometric elements may then be calculated, compared, and evaluated, or stored, or printed out as required; and see col. 3, lines 21-26, also, automatic data recording, available on most machines, prevents errors in transcribing readings to the inspection report).

With respect to claims 32 and 33, Bell further teaches that, the output of the evaluation is a report (see col. 3, lines 21-26, also, automatic data recording, available on most machines, prevents errors in transcribing readings to the inspection report; and see col. 5, lines 46-51, statistical analysis software available provides for graphic data display, including histograms).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-16, 19-22, 28-31 and 34-38, rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. Patent No. 5,291,393) in view of Bell et al. (U.S. Patent No. 4,819,195) and Michiwaki (U.S. Patent No. 6,012,022).

With respect to claims 1, 19, 28, 37 and 38, Matsumoto et al. (hereafter Matsumoto) teaches a method (or a computer readable medium or a device) of evaluating a physical object, the method comprising:

reading instructions of a macro (see col. 7, lines 44-46),

said macro configured for use with measurement equipment, said measurement equipment being capable of performing measurements of said physical object (see col. 8, lines 5-17);

Matsumoto does not teach;

said macro comprising instructions for said equipment to perform an evaluation of said physical object.

But Bell et al. (hereafter Bell) teaches in a method for calibrating a coordinate measuring machine (CMM), that coordinate measuring is typically a two or three-dimensional process that determines the position of holes, surfaces, centerlines and slopes. Also, if multiple inspections of similar parts are required, a reference location point may be established with a reference precision cube or sphere. Reader heads, traveling on

each axis along built-in axis measuring scales, transfer the instantaneous machine position through the digital display and to the computer interface. The dimensional and geometric elements may then be calculate, compared, and evaluated, or stored, or printed out as required (see Bell; col. 2, lines 25-47).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Matsumoto to include a calibrating a coordinate measuring machine (CMM) as taught by Bell, because the calibrating a CMM of Bell allows to Reader heads, transfer the instantaneous machine position through the digital display to the computer interface. The dimensional and geometric elements may then be calculate, compared, and evaluated, or stored, or printed out as required, as desired.

Matsumoto does not teach;
reading a stored numerical representation of said physical object.

But Michiwaki teaches in a measuring AID system that, the Dimensional Measuring Interface Standard (DMIS) language is a language specification that has been developed for exchanging data between a Computer Aided Design (CAD) and a three-dimensional measuring apparatus. The CAD system sends definition information of geographic shapes created as designed values and information of a measurement path to the three-dimensional measuring apparatus. The three dimensional measuring apparatus overwrites the measured

results to a part program file in the DMIS language and sends back the resultant file to the CAD system (see Michiwaki; col. 5, lines 34-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Matsumoto to include a DMIS language as taught by Michiwaki, because the DMIS language of Michiwaki allows to a Computer Aided Design (CAD) system sends definition information of geographic shapes created as designed values and information of a measurement path to the three-dimensional measuring apparatus, as desired.

Matsumoto does not teach;

generating an evaluation of said physical object by performing the instructions of said macro upon the stored numerical representation of the surface of said physical; nor

outputting said evaluation.

But Bell teaches that, many software packages also provide a means for evaluating geometric tolerance conditions by determining various types of form and positional relationships (such as flatness, straightness, circularity, parallelism, or squareness) for single features and related groups of features (see Bell; col. 5, lines 34-39).

Bell also teaches that statistical analysis software available provides for graphic data display, including histograms (see Bell col. 5, lines 46-51).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Matsumoto to include a calibrating a coordinate measuring machine (CMM) as taught by Bell, because the calibrating a CMM of Bell allows to evaluating geometric tolerance conditions by determining various types of form and positional relationships for single features and related groups of features, providing graphic data display including histograms, as desired.

With respect to claims 2 and 29, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said numerical representation of the surface is obtained by scanning part or all of the physical object using an object scanner (see col. 7, lines 22-32).

With respect to claim 3, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said numerical representation of the surface is any of point cloud data, triangulated mesh data, rendered surface data, and polyline data (see col. 6, lines 34-40; col. 11, lines 34-41 and FIG. 11).

With respect to claims 4 and 30, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto

further teaches, said measurement equipment is a Coordinate Measuring Machine, CMM (see col. 10, lines 43-58).

With respect to claims 5, 7 and 13, Katsumoto in combination Bell teaches all the features of the claimed invention, except that Katsumoto does not teach;

wherein said macro comprises Dimensional Measuring Interface Standard, DMIS, commands; nor

comprising communicating said evaluation by part of a DMIS-measurement program or by using DMIS commands format.

But Michiwaki teaches in a measuring AID system that, the Dimensional Measuring Interface Standard (DMIS) language is a language specification that has been developed for exchanging data between a Computer Aided Design (CAD) and a three-dimensional measuring apparatus. The CAD system sends definition information of geographic shapes created as designed values and information of a measurement path to the three-dimensional measuring apparatus. The three dimensional measuring apparatus overwrites the measured results to a part program file in the DMIS language and sends back the resultant file to the CAD system (see Michiwaki; col. 5, lines 34-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Matsumoto with Bell to include a DMIS language as taught by Michiwaki, because the DMIS language of

Michiwaki allows to exchange data between a Computer Aided Design (CAD) and a three-dimensional measuring apparatus, as desired.

With respect to claim 6, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said macro comprises CMM commands (see col. 9, lines 36-50).

With respect to claims 8 and 36, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, comprising communicating the said evaluation in the format of CMM measurement results (see col. 9, lines 36-50 and TABLE 2, 4).

With respect to claims 9, 34 and 35, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches that, the instructions of said macro that are performed relate to the measurement of data from the numerical representation of the surface (see col. 10, lines 43-58).

With respect to claim 10, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, comprising performing translations through the surface of the object (see col. 10, lines 43-48).

With respect to claim 11, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches that, the macro comprises instructions for performing a measurement comprising:

(a) determining elements of data that numerically represent the object, and that correspond to the position on the physical object to be measured, without increasing the resolution by calculating the co-ordinates of any additional points (see col. 10, lines 8-17);

(b) calculating additional points by interpolation of the determined elements, wherein the additional points increase the resolution in an area of a position to be measured (see col. 11, lines 34-41 and FIG. 11);

(c) calculating from the area of increased resolution a measurement of the object (see col. 11, lines 42-62).

With respect to claim 12, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches that, one or more instructions of said macro have been created by using said numerical representation of the physical object (see col. 10, lines 8-17).

With respect to claim 14, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto

further teaches, said instructions are part of a measurement sequence generated by recording commands of a Coordinate Measuring Machine measurement program (see col. 10, lines 8-17).

With respect to claim 15, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said instructions are part of a measurement sequence in a Coordinate Measuring Machine measurement program (see col. 10, lines 19-42).

With respect to claim 16, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said evaluation comprises the execution of steps on a computer in an automatic way without interaction with the user of said computer during the execution of said steps (see col. 10, lines 34-42).

With respect to claim 20, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, comprising instructions which, when executed cause the computer to receive a numerical representation of the physical object from a remote computer (see col. 1 line 63 to col. 12 line 20).

With respect to claim 21, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto

further teaches that, the numerical representation is received from the remote computer by physical transport of a computer readable storage medium holding said numerical representation (see col. 11 line 63 to col. 12 line 20).

With respect to claim 22, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said computer readable storage medium comprises magnetic disk, magnetic tape (see col. 7, lines 33-44).

With respect to claim 31, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, that the output of the evaluation is a report (see col. 12 line 30 to col. 14 line 50, TABLE 1, 2 3, 4).

5. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. Patent No. 5,291,393) in view of Bell et al. (U.S. Patent No. 4,819,195), Michiwaki (U.S. Patent No. 6,012,022) and Kreidler et al. (U.S. Patent No. 6,954,680).

With respect to claim 23, Matsumoto et al. (hereafter Matsumoto) in combination with Bell et al. (hereafter Bell) and Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches providing instructions,

which, when executed cause the computer to display a user interface (see col. 7, lines 54-59).

Matsumoto does not teach displaying a user interface on a web browser of a remote computer connected to the Internet.

But Kreidler et al. (hereafter Kreidler) teaches in a system for the electronic provision of services for machines via a data communication link, that, in the area of industrial automation technology and, in particular, in the field of numerically controlled processing machines, on the basis of an Internet connection, automatic services or data contents or software components required for this purpose are made available to a plurality of end-customers having machines with which information is exchanged bi-directionally (see Kreidler; col. 7, lines 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Matsumoto, Bell and Michiwake to include services for machines via data communication link as taught by Kreidler, because the services for machines via data communication are made to a plurality of end-customers having machines with which information is exchanged bi-directionally through Internet, as desired.

Matsumoto further teaches, said interface allowing a user to send the numerical representation of the physical object over the Internet to a computer configured to perform said method (see Matsumoto; col. 7, lines 54-59).

With respect to claims 24-26, Matsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention; Matsumoto further teaches providing instructions, which, when executed, cause the computer to display a user interface (see col. 7, lines 54-59).

Matsumoto does not teach, displaying a user interface on a web browser of a remote computer connected to the Internet, said interface allowing a user to send said macro (or the title of said macro) over the Internet to a computer configured to perform said method.

But Kreidler teaches in a system for the electronic provision of services for machines via a data communication link, that, in the area of industrial automation technology and, in particular, in the field of numerically controlled processing machines, on the basis of an Internet connection, automatic services or data contents or software components required for this purpose are made available to a plurality of end-customers having machines with which information is exchanged bi-directionally (see Kreidler; col. 7, lines 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Matsumoto, Michiwaki to include services for machines via data communication link as taught by Kreidler, because the services for machines via data communication link allows to a

plurality of end-customers having machines with information, exchange this information bi-directionally through Internet, as desired.

6. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. Patent No. 5,291,393) in view of Bell et al. (U.S. Patent No. 4,819,195), Michiwaki (U.S. Patent No. 6,012,022) and Rabin et al. (U.S. Patent No. 6,697,948).

With respect to claim 27, Katsumoto in combination with Bell and Michiwaki teaches all the features of the claimed invention, except that Katsumoto in combination with Bell and Michiwaki does not teach, providing instructions, which, when executed, cause the computer to display a pay-per-use interface on a web browser of a remote computer connected to the Internet, said pay-per-use interface configured to perform at least one of

- requesting a username and password to the remote computer user
- so as to enable a user to access an account for using the method,
- requesting billing information of the remote computer user,
- indicating a billing amount to the remote computer user, the billing amount relating to the number of evaluations performed, and
- providing a username and password to the remote computer user so as to enable a user to access an account for using the method.

But Rabin et al. (hereafter Rabin) teaches in an apparatus for protecting information that, as an example of pay-per-use or pay-per-view, each time an instance of pay-per-use software is used, the supervising program (SP) can record this in the RUN COUNT field. The RUN COUNT information can later be used for billing purposes (see Rabin; col. 43, lines 37-43).

Rabin also teaches that, an example of the user identification ID (USER) may be a username and/or password combination. An example of the identification of the user device ID (DEVICE) may include the hostname, host id, IP address, serial number or other hardware or device specific information that can uniquely distinguish this user device from other user devices (see Rabin; col. 44, lines 1-7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Matsumoto, Bell and Michiwaki to include the supervising program as taught by Rabin, because the supervising program allows to execute a pay-per-use instructions requesting username and/or password combination for a billing purpose, as desired.

Final Rejection

Response to Arguments

7. Applicant's arguments with respect to the claims have been fully considered but they are moot in view of the new ground(s) of rejection set forth hereinbefore.

Action Is Final, Necessitated by Amendment

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sawaga et al. [U.S. Patent No. 6,804,575] describes an automatic programming apparatus that executes a numerical controller process.

Sutula, JR. [U.S. Patent Application Publication No. 2002/0114537] describes a model surface by numerical control.

Yamazaki et al. [U.S. Patent No. 6,400,998] describes a numerical control machine tool system.

Knapp et al. [U.S. Patent No. 4,662,074] describes apparatus for determining precision of a numerically controlled machine.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix Suarez, whose telephone number is (571) 272-2223. The examiner can normally be reached on weekdays from 8:30 a.m. to 5:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and for After Final communications.
September 30, 2008

/Felix E Suarez/
Examiner, Art Unit 2857

/Eliseo Ramos-Feliciano/
Supervisory Patent Examiner, Art Unit 2857